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UNUSUAL PATTERNS OF THOUGHT AS RELATED TO SIGNIFICANT PAST
RELATIONSHIPS, ATTACHMENT, AND EGO DEFENSE STYLES

A Thesis

Presented to

The Faculty of the Department of Psychology

The College of William and Mary in Virginia

In Partial Fulfillment

Of the Requirements of the Degree of

Masters of Arts

by

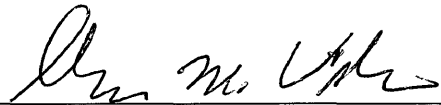
Sharon M. Wilson

2001

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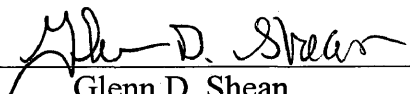
This thesis is submitted in partial fulfillment of
the requirements for the degree of

Masters of Arts



Sharon M. Wilson


Approved, April 2001



Glenn D. Shean



Rick P. Friedan



Neil P. Watson

Dedication

For myself for all the sweat and tears I put into this yearlong project. I did it!
And for my parents and sister, without whom I might have never made it this far.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	v
LIST OF TABLES	vi
LIST OF FIGURES	vii
ABSTRACT	viii
INTRODUCTION	2
METHODS	14
RESULTS	17
DISCUSSION	21
REFERENCES	27
TABLES	30
FIGURE CAPTIONS	36
FIGURES	37
APPENDICES	40

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Finally, I would like to show my ever-growing appreciation and thanks to all the friends I have made here over the last two years who have helped me stay focused, sort of, and driven me around countless times to many fun dinners. Thanks to Mike G. for trying to make me smile, Layne P., Monica A. (aka “sinful”), Carrie S., Heather I., Ashley B., Pat B., and Roxie G. For Matt D. -- we will always have those two weeks. And an extra-special thanks to Greg and Lila for putting up with me and all my “yo’s” and tyrannosaurus poking for two whole years! I will never forget any of you.

LIST OF TABLES

Table	Page
1. Influential Relationships Questionnaire (IRQ) Means for PerMag Scorers	30
2. Influential Relationships Questionnaire (IRQ) Means for Social Anhedonia Scorers	31
3. Attachment and Object Relations Inventory (AORI) Means and Social Anhedonia	32
4. Total of Non-Mature Ego Defenses Means and Social Anhedonia	33
5. Gender Effects on Specific Ego Defenses Means	34
6. PerMag Effects on IRQ Total Means After Controlling for Gender	35

LIST OF FIGURES

Figure		Page
1.	PerMag x Social Anhedonia interaction for AORI closeness subscale	37
2.	PerMag x Social Anhedonia interaction for IRQ Care subscale with gender as a covariate	38
3.	PerMag x Social Anhedonia interaction for IRQ Criticism subscale with gender as a covariate	39

Abstract

An individual's proneness towards unusual thinking and behaving can ultimately lead to the exhibition of psychological disorders and may be impacted by significant relationships, attachment issues, and ego defense styles of the individual's early life. Attempting to come up with scales that can help diagnose proneness towards psychological disorders such as schizophrenia-spectrum disorders, researchers are hoping to better prevent the onset of a full-blown disorder. The present study investigates the validity and reliability of three of Chapman's (1980) scales of Proneness to Psychotic Thought: the Magical Ideation scale, the Perceptual Aberration scale, and the Social Anhedonia scale. Scales dealing with attachment processes, ego defense styles, and influential relationship patterns are included for analyses. Significant findings are mixed, indicating need for further study with a larger population using variations on the secondary scales.

UNUSUAL PATTERNS OF THOUGHT AS RELATED TO SIGNIFICANT PAST
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Unusual Patterns of Thought as Related to Significant Past Relationships,
Attachment, and Ego Defense Styles

Every individual has a distinct past that shapes the person into who he or she is today. Included in that past are places, objects, people, and events in the person's life. Interpersonal relationship patterns learned and practiced throughout a person's life play a significant role in the relationship patterns adhered to during the present. Specifically, important relationships can imprint upon present and future relationships. One's present relationship patterns as well as present mental state can be linked to significant others in one's life. Significant others can be thought of as the people in one's past and present life "with whom the most has been learned" (Anderson & Baum, 1994, p.460). According to Anderson, past significant others are represented in memory as unique mental representations (Anderson & Cole, 1990). When a new person triggers memories of elements of past relationships, the new person will be treated as the past significant other in the present social interaction. In so doing, people may continue to experience "pleasures and disappointments [in their interpersonal lives] that have an oddly familiar ring" (Anderson & Baum, 1994, p.492).

Many of our most basic "social-cognitive processes are likely to have evolved for the specific purpose of facilitating interpersonal functioning" (Cosmides & Tooby, 1992). Applying preconceived notions towards a present scenario is not new to psychology. Information processing models of social judgement suggest that "people draw upon preexisting knowledge when attempting to understand others, applying preconceived ideas to new experiences to fill in the gaps about what is actually learned" (Fiske & Taylor, 1991 and Bruner, 1957 as cited in Anderson and Baum, 1994). Using past

information to understand a current person or event can be beneficial if the past information was learned and practiced in a consistently healthy fashion. However, if the past information is based on problematic past relationship patterns, present interactions may also be tainted. Problems in the area of interpersonal relationships can infringe upon the mental health of an individual. “Social isolation, rejection, and antisocial behavior in childhood are major risk factors for later mental health problems” (Hartup, 1989). Most human behaviors “take place in the context of the individual’s relationships with others” (Reis, Collins, & Berscheid, 2000). Relationship experiences alter the course of an individual’s mental development (Reis, Collins, & Berscheid, 2000).

The current study will focus on subjects’ past significant relationships in regard to their present lives and mental health. Present life is a broad term that in the case of the present study will include the ways the individual thinks and perceives, the attachment processes of the individual, the ways the individual adapts to the environment and his or her inner processes as seen through a measure of ego defense styles, and the sociability of the individual.

Mental Health

Problems with past and present relationships as well as attachments from childhood throughout adulthood, styles of ego defensiveness, and styles of socializing all contribute to a person’s mental health or lack thereof. Specifically, schizophrenia and other disorders along the schizophrenia spectrum such as schizoid personality disorder and schizotaxia are in need of better early detection protocols in order to improve the prognosis and functional outcome of these individuals (Frangou & Bryne, 2000).

Although the typical onset of the first major psychotic episode of schizophrenia occurs in the late teenage years to the early twenties, the illness can remain undetected for years prior to the initial psychotic break (Frangou & Bryne, 2000). More prominent during the early phase of schizophrenia, or pre-psychotic symptoms, are neurotic symptoms such as social anxiety, obsessional ideas, antisocial behavior, and functional deficits in the areas of social life, emotion, and motivation (Frangou & Bryne, 2000). Childhood manifestations of the underlying disorder might include “odd behaviors, magical thinking, poor empathy, belief in extrasensory perception, ritualistic repetitive behaviors...socially unengaged, hypersensitive to criticism, and nervously reactive to events” (Kernberg, Weiner & Bardenstein, 2000, p.231).

People who seem to be prone to schizophrenia based on either genetics or various personality and behavior scales, such as the Chapman and Chapman Psychotic Proneness Scales (1979), might have low, moderate, or high “doses” of the risk factors that measure how predisposed people are to the disorder (Tsuang, Stone, & Faraone, 2000). People with more risk factors might also be more prone to full blown schizophrenia, while people with milder risk factors might exhibit milder neurobiological manifestations of mental health problems (Tsuang, et al., 2000). Specifically, Meehl (1964) introduced the term schizotaxia into the mix of clinical variations of schizophrenia-spectrum disorders. He felt that schizotaxia, being the predisposition genetically towards a schizophrenia-spectrum disorder, might eventually lead to full schizophrenia, schizotypy, schizoid personality disorder or even lead to nothing more than minor mental health problems due to the experience of stressors of each individual.

Once a psychotic break has occurred schizophrenia is easily diagnosed. However, treatment would be most beneficial if administered prior to the psychotic break.

Evidence suggests, “the pathophysiology of schizophrenia is in place long before the first psychotic episode” (Tsuang, Stone, & Faraone, 2000). Maldevelopment of the brain during the second trimester of life due to a combination of genes and environmental events could be a possible cause of the brain abnormalities found in schizophrenics.

McGlashan and Hoffman (2000) propose a developmental model “of reduced synaptic connectivity arising from disturbances of brain development” such as synaptogenesis during gestation and synaptic pruning during adolescence (p.637). Studies have shown a higher rate of ventricular enlargement and a greater loss of temporal, frontal, and parietal gray matter throughout four years of mid-adolescence in patients with childhood onset schizophrenia (McGlashan & Hoffman, 2000). It has also been suggested that this neurodevelopmental disorder is progressive. In rat studies, rats with perinatal damage to the ventral hippocampus only exhibited problematic behaviors with the onset of puberty (McGlashan & Hoffman, 2000). This is consistent with the fact that the easily distinguishable schizophrenia symptoms are not seen in humans until around puberty or slightly later. Schizotaxia might be an expression of this pre-puberty schizophrenic state (McGlashan & Hoffman, 2000). By being able to correctly diagnose schizophrenia or even people at high risk of fully developing schizophrenia, clinicians can better treat the possible brain abnormalities that seem to form from the years pre-birth throughout adolescence.

Whether the brain abnormalities cause the mental symptoms of schizophrenia, or whether the slowly manifesting mental symptoms of schizophrenia cause the typical

brain abnormalities is not known. However, by being able to treat individuals with a greater disposition for schizophrenia, clinicians might be able to hinder the progress of the disease into its more well known, psychotic form. By finding or producing scales and tests which are sensitive to the less psychotic and more neurotic symptoms of earliest schizophrenia, clinicians can hope to form a reliable and valid test to weed out people most prone to schizophrenia, and hence, cut off the major mental problem before it truly manifests itself with irreversible brain abnormalities.

Thinking and Perceiving

The Chapman Magical Ideation, Perceptual Aberration, and Social Anhedonia scales (1982) all test for specific signs that Meehl (1964) proposed are seen in individuals possessing “a latent ability” for unusual ways of thinking and perceiving such as anhedonia, atypical perceptual experiences, illogic, and beliefs on magical events (Lenzenweger & Loranger, 1989). In other words, Chapman’s scales are a step towards the goal of developing scales being used to find psychosis-prone individuals in the general population. The Perceptual Aberration Scale includes true-false questions about body image and unusual perceptual experiences. Elevated Perceptual Aberration scores in undergraduate students have been related to communication deviance (Lenzenweger & Loranger, 1989). However, Perceptual Aberration scores taken alone have not been linked to lower levels of social competence (Lenzenweger & Loranger, 1989). The Magical Ideation Scale includes questions about beliefs in magic and paranormal phenomena. Together the Perceptual Aberration and Magical Ideation (Per-Mag) scales are thought to indicate the strength of a latent tendency toward unconventionality and “fuzzy logic” in thinking that may complicate social interactions. People scoring high

(approximately two standard deviations above the norm) on the Per-Mag scales are also more prone, for example, to believe in psychic phenomena such as ESP and life after death (Thalbourne, 1994).

High Per-Mag scorers (2 standard deviations above the mean) have been shown to exhibit more schizotypal and psychotic symptoms than controls (.5 standard deviation around the mean). After a 25-month follow up, Chapman and Chapman found that 10 of the original 193 high scoring Per-Mag subjects had had a psychotic episode (Cadenhead, Kumar, and Braff, 1996). Seven of the 33 participants who scored high on both the Magical Ideation and Social Anhedonia Scales were psychotic at the follow up session. Of Chapman and Chapman's psychosis proneness scales, Magical Ideation, Perceptual Aberration, and Social Anhedonia seem to be the most sensitive to predicting proneness to mental health disturbances.

Socializing

The Social Anhedonia Scale (1982) measures how a person deals with social situations and measures the amount of pleasure one takes out of socially interacting. College students 2 standard deviations above the mean have reported significantly less sociability (Mishlove & Chapman, 1985) than scorers within .5 standard deviation of the mean. College students high on the Social Anhedonia scale have been correlated with greater social withdrawal, less heterosexual interest, and poorer social adjustment (Blanchard, Bellack & Mueser, 1994).

High Social Anhedonia scorers are predicted to show a heightened risk for schizophrenia-spectrum disorders and poor social adjustment (Kwapil, 1998). Asociality is "characteristic of the preschizophrenic condition" (Kwapil, 1998, p.558). Meehl

believes that all schizophrenia-prone individuals will show Social Anhedonia as a core symptom (Kwapil, 1998). At the initial assessment, the high scoring Social Anhedonia group was not particularly mentally unhealthy (Kwapil, 1998). However, at the 10-year follow up, the high Social Anhedonia group experienced “marked problems of adjustment and psychopathology” (Kwapil, 1998, p.560). Of the individuals in the high Social Anhedonia group at the ten-year follow up, 24% were or had been diagnosed with a schizophrenia-spectrum disorder, as opposed to only 1% in the control group of average scoring Social Anhedonia participants. The high Social Anhedonia group also had significantly lower ratings on a six-point scale of quality of intimate relationships as well as lower marriage rates (38% versus 68%) than the average Social Anhedonia scoring control group. However, the groups did not differ in divorce rates, substance abuse problems, depression problems, or the percent of individuals who sought mental health treatment within the 10-year period. Kwapil’s study, among others, shows that Social Anhedonia can be a predictor of various social problems later in life, as well as an important aspect of predicting proneness to schizophrenia-spectrum disorders later in life.

Taken together, the Magical Ideation Scale and the Social Anhedonia Scale (MagSoc) provide a better predictor of mental instability than taken separately. High scorers on the MagSoc exceeded the control group on the “mean rating of each participant’s most psychotic-like experience” (Kwapil, Miller, Zinser, Chapman, & Chapman, 1996, 492). Using the portions of Loranger’s (1988) Personality Disorder Exam (PDE) which assessed schizotypal, schizoid, paranoid, and borderline personality disorders, Kwapil, et al. (1996) found that the high MagSoc scorers significantly exceeded the control group on schizotypal, borderline, and paranoid dimension scores.

The high MagSoc scorers also reported significantly fewer years of education. Taking the Social Anhedonia scores by themselves, it seems that a higher cutoff (preferably greater than 1.5 standard deviations above the mean) is needed to show correlations with psychosis proneness in socially anhedonic individuals (Kwapil, et al., 1996).

Correlations of measures of past attachments, current defense styles and relationships with the Chapman Per-Mag/ Social Anhedonia scales should indicate the degree to which these scales measure important aspects of current psychological and social functioning. These correlations should also indicate the degree to which these scales measure proneness to spectrum disorders.

Attachment

Attachment can be seen as “one’s working models of relatedness or bonding quality” (Bowlby, 1973). Attachment is better defined as processes lying along continua of security, intimacy (closeness), and exploration (individuation). These processes can be focused on parents, peers, and romantic partners. Attachment processes and the idea of object relations are intertwined since birth. Although the term object relations refers to relationships with either external or internal objects, attachment can be viewed as the relations to living “objects”. How one attaches throughout one’s life is directly influenced by the quality of early object relations. By looking at past attachment processes, one can hope to form a better understanding of both present and future relationships.

Attachment theories seek to understand one’s development in the context of one’s close relationships with parents, siblings, friends, and romantic partners (Lopez and Brennan, 2000). People seek security and closeness in their relationships as early as birth

with the parent-child bond. A secure parent-child bond initiates the child into the world of interpersonal relationships with a secure schema of what a relationship should be. However, “poorly developed infant bonding with the primary caregiver negatively affects children’s later attachment” (Buelow, McClain, and McIntosh, 1996). Once these primary attachments are internalized, a working model of the self and others in relation to attachment is developed. According to Bowlby (1973), “individuals interpret their experiences in ways consistent with their working models and, thus, successfully validate those models throughout life” (Beulow, et al., 1996, p.605).

Adult attachment is more complex and differentiated than a child’s initial parental attachment (Buelow, McClain, & McIntosh, 1996). After childhood, people attach to not only parents but also peers and romantic partners. Buelow, McClain, and McIntosh’s Attachment and Object Relations Inventory (AORI) (1996) measures attachment as views of the self as well as views of a wide range of others, exploring the interdependence with significant others and the person’s psychological dependence from those others. The AORI items reflect both the individual’s view of him or herself as well as how that person feels others perceive him or her. The AORI incorporates the idea of attachment into five polar dimensions. One can view the self as warm, close, and affectionate with others as opposed to being distant, less affectionate or angry. A person may view the self as secure and interdependent versus dependent, clingy, or preoccupied. One can also view the self as anxious versus not anxious. The fourth and fifth dimensions deal more with the significant others in the person’s life. Parents, peers, and partners can be viewed as emotionally accessible as opposed to not accessible. Finally, others can be viewed as

likely to be responsive to expressed needs versus unresponsive (Buelow, McClain, & McIntosh, 1996).

Individuals without secure attachment styles have been shown to be over-represented in clinical samples compared to base rates in the general population (Lopez & Brennan, 2000). These individuals are assumed to have “internalized negative self-models” (Lopez & Brennan, 2000, p.294) which would lead them to unhealthy mental states. More securely attached individuals have been found to score significantly lower on all personality disorder scales compared to less securely attached individuals (Brennan & Shaver, 1998).

Ego Defense Styles

The present study will also look at ego defense styles that “encompass both adaptation to the environment and adaptation to inner processes” (Conte, et al., 1991, p.70). In other words, ego defenses organize the mind and the way a person adapts to his or her environment (1991). Like attachment processes, ego defenses help the person adapt to the changing situations of everyday life. The present study includes an inventory (Life Style Index; Plutchik et al., 1979) that measures eight distinct ego defense styles: compensation (including identification and fantasy), denial, displacement, intellectualization (including sublimation, undoing, and rationalization), projection, reaction formation, regression (including acting out), and repression (including isolation and introjection). The participant’s scores on these eight styles will be examined in conjunction with his or her scores on past significant other relationships as measured by the Influential Relationships Questionnaire (Baker, Holmes & Kazarian, 1984), as well as his or her scores on the Chapman and Chapman’s Per-Mag and Social Anhedonia scales.

Ego functioning can range along a continuum from an absence of significant relationships through relationships based only on early, unresolved conflicts and barely formed ego development to optimal relationships based on healthy ego development and gratifying realism (Bell, Lysaker, and Milstein, 1992). Usage of less mature ego defenses can be seen in people with less social tendencies as well as aberrant ways of thinking as seen by scales such as Chapman and Chapman's (1992) Per-Mag and Social Anhedonia scales. The ego defenses continuum ranges from the earlier formed, less mature defense styles to the mature, more adult developed styles. Denial is considered the least mature defense style according to Plutchik, Kellerman, and Conte's Life Style Index (1979). They also believe that regression, projection, displacement, and repression are less mature. As one grows into adulthood, the more mature defense styles such as reaction formation, intellectualization, and compensation should develop in the healthy individual. These mature styles are more controlled and promote more social behavior than the less mature ego defenses.

Use of the less mature defenses has been shown to correlate with less sociability and more proneness to mental health disturbances in the individual (Crandall & Biaggio, 1984). Specifically, more social women scored significantly lower on overall defensiveness than the low social women based on results using both the Social Interest Scale (Crandall, 1975) and the Social Interest Index (Greever, Tseng, & Friedland, 1973) to measure socialness (Crandall & Biaggio, 1984) and the Life Style Index (Plutchik et al., 1979) to measure the eight ego defenses. Low social women scored significantly higher than the high social women on three of the defense styles: regression, projection, and displacement. Although use of denial showed mixed results, according to the study,

the less social women used the less mature defense styles more frequently. Men failed to show any significant results.

According to McCullough's (2000) Cognitive Behavioral Analysis System of Psychotherapy (CBASP), important information can be derived from a person's past significant other relationships. The present research will attempt to determine the relationships between proneness to magical thought and perceptual experiences and the quality of past significant other relationships as well as the quality of overall attachment and ego defense functioning. The present research is designed to further evaluate the validity of the Chapman Magical Ideation, Perceptual Aberration, and Social Anhedonia measures as indicators of overall functioning and proneness to mental health disturbances such as schizophrenia-spectrum disorders.

Hypotheses are as follows:

1. High scoring Perceptual Aberration/ Magical Ideation (Per-Mag) individuals will score significantly higher on the Social Anhedonia scale than average scoring Per-Mag individuals.
2. High Per-Mag individuals and high scoring Social Anhedonia individuals separately will evidence greater dissatisfaction with past significant other relationships as measured by the Influential Relationships Questionnaire than lower scoring participants.
3. High Per-Mag and high Social Anhedonia individuals separately will report less secure attachment patterns than lower scoring individuals.
4. High Per-Mag and high Social Anhedonia individuals separately will evidence less mature ego defense styles than lower scoring individuals.

- a. High Per-Mag scorers and high Social Anhedonia scorers will exhibit higher levels of regression, projection, displacement, repression, and denial (less mature ego defenses).
- b. High Per-Mag scorers and high Social Anhedonia scorers will exhibit lower level usage of compensation, intellectualization, and reaction formation (more mature ego defenses).

Method

Participants

Participants were 120 college age male (30) and female (59) students from the College of William and Mary Introductory Psychology courses. The gender of the remaining 31 participants was undetermined to do lack of response to the gender question. Based on the pre-screening results, 32 participants were at least 1.5 standard deviations above the mean on the combined Chapman Scales of Magical Ideation and Perceptual Aberration, 59 participants were within .5 deviation of the mean, and 29 others did not scoring in the above categories.

Measures

Scales included in the study were the Magical Ideation Scale (pre-screening) (Chapman & Chapman, 1972), the Perceptual Aberration Scale (pre-screening) (Chapman & Chapman, 1972), the Revised Social Anhedonia Scale (Eckblad, Chapman, Chapman, & Mishlove, 1982), the Attachment and Object Relations Inventory (Buelow, McClain, & McIntosh, 1996), the Life Style Index (Plutchik, Kellerman, & Conte, 1979),

and a revised version of the Influential Relationships Questionnaire (Kazarian & Baker, 1987).

Chapman and Chapman's Scales include three true-false item scales. Two of the scales, Perceptual Aberration and Magical Ideation (Per-Mag), were given during pre-screening to all introductory psychology students and will be readministered in the test session. The Magical Ideation Scale (30 true-false items), and the Perceptual Aberration Scale (35 true-false items) measure a person's tendency towards magical thinking and unusual perceptual experiences (Appendix A and B). They include statements such as "I have sometimes felt that strangers were reading my mind" and "Occasionally I have felt as though my body didn't exist". The Revised Social Anhedonia Scale (40 true-false items) measures a person's tendency towards a lack of pleasure with anything social in nature (Appendix C). This scale includes statements such as "I could be happy living all alone in a cabin in the woods or mountains". All three of these scales are published in the public domain.

The Attachment and Object Relations Inventory (AORI) by Buelow, McClain, and McIntosh (1996) measures one's attachments with peers, parents, and partners with subscales covering continuums such as secure, independent, and close (Appendix D). The AORI is a 60-statement inventory scored on a five point Likert scale ranging from strongly disagree to strongly agree with each statement. Statements such as "I often feel needy" and "Close relationships make me uncomfortable" describe the person ranging from fully to not at all. The AORI is divided into six subscales consisting of peers, parents, and partners, secure, independent, and close. The authors granted permission for use of the AORI in this study.

The Life Style Index by Plutchik, Kellerman, and Conte (1979) is a measure of ego defense styles (Appendix E). The Index consists of 92 yes or no statements. There are eight subscales to the Life Style Index referring to eight specific defense styles: compensations (including identification and fantasy), denial, displacement, intellectualization (including sublimation, undoing, and rationalization), projection, reaction formation, regression (including acting out), and repression (including isolation and introjection). This scale is in the public domain.

The revised Influential Relationships Questionnaire (IRQ) by Baker (1987) includes three parts, each consisting of 37 statements scored on a four point Likert scale (1= strongly agree to 5= strongly disagree). The three parts contain the same 37 statements, however they are read in reference to different past significant others. One 37-statement scale is filled out for each of three important past significant others (the first, second, and third most important, respectively, in the subject's life). The IRQ scores the care, criticism, and overprotection exhibited in each of the significant other relationships (Appendix F). The author granted permission for use of the IRQ in this study.

Procedure

Chapman's Magical Ideation and Perceptual Aberration Scales (Chapman, L.J., & Chapman, J.P., 1980) were given to college students from the Introductory Psychology classes at William and Mary in the pre-screening process. Based on the pre-screening process, the participants were divided into high scorers (at least 1.5 standard deviations above the mean on the combined score on Magical Ideation and Perceptual Aberration Scales) and a control group (.5 standard deviation around the mean). First the

participants read and signed a consent form. The experimenter read the instructions and allowed the participants a full hour to fill out the questionnaires. Within each group each participant received all of the dependent measures in randomized order. After the completion of the questionnaires, the participants were debriefed. The completed measures as well as the mass testing data for each participant was given a number per subject. The experimenter was the only one to see the participant's email and subject number initially. After all measures and pre-screening scores were coded per participant, the experimenter scored all the measures, thereby increasing everyone's anonymity by only relating the participant's number to his or her scores.

Results

The means gathered from male and female participants on the Magical Ideation, Perceptual Aberration, and Social Anhedonia scales were compared to Kwapil's (1998) college student sample means of the Chapman Psychosis Proneness Scales. All were found to be within the range of Kwapil's previous means taking into account his standard deviations. The mean scores for both females ($\underline{M} = 5.71$) and males ($\underline{M} = 6.37$) on the Social Anhedonia scale were slightly lower in the present college student sample than in Kwapil's (females: $\underline{M} = 6.78$, males: $\underline{M} = 8.91$). Since scores on the Social Anhedonia scale were continuous, a median-split of the Social Anhedonia scale scores divided the participants into equal groups scoring high or low on Social Anhedonia. The first hypothesis, that PerMag scores positively correlate with scores on the Social Anhedonia scale, was marginally confirmed, $r = .16$, $p < .05$.

The IRQ

A 2 (Hi-Lo Per-Mag) x 2 (Hi-Lo Social Anhedonia) MANOVA was used to analyze the relationship between the participants scores on the PerMag scales, the Social Anhedonia scale, and the IRQ. Considering only the totals of the three subsections of the IRQ (care, criticism, and overprotection), the Pillai's overall F for PerMag, $F(3,69) = 2.237$, $p = .092$, and Social Anhedonia, $F(3,69) = 2.345$, $p = .080$, approached significance. ANOVA's for specific subscales suggested that the average Per-Mag participants scored lower on the Care component of the IRQ compared to high scoring individuals on the PerMag scales, $F(1,71) = 4.207$, $p < .05$ (see Table 1 for means). Average scoring participants of the PerMag scales also scored higher than the high scorers on the Criticism, $F(1,71) = 5.730$, $p < .01$, and Overprotection, $F(1,71) = 4.018$, $p < .05$, components of the IRQ as specific ANOVA's suggested (see Table 1 for means).

Lower scoring Social Anhedonia participants also scored lower on the Care component of the IRQ than high participants, $F(1,71) = 5.180$, $p < .05$ (see Table 2 for means). Participants who scored in the bottom half on the Social Anhedonia scale scored higher on the criticism component of the IRQ, $F(1,71) = 6.133$, $p < .05$ (see Table 2 for means).

Separating the Care, Criticism, and Overprotection totals of the IRQ into sub-totals for the most, second most, and third most influential relationships provided no further significant results. No overall significance was observed for PerMag, Pillai's $F(9,63) = 1.284$, $p = .263$, ns, or Social Anhedonia, Pillai's $F(9,63) = 1.155$, $p = .339$, ns.

The AORI

A 2 (Hi-Lo PerMag) x 2 (Hi-Lo Social Anhedonia) MANOVA found significant relationships between PerMag, Social Anhedonia, and scores on the closeness subscale of the AORI. The PerMag effect for the overall AORI was not significant, Pillai's $F(6,60) = .712$, $p = .641$, ns. The effect for Social Anhedonia approached significance, Pillai's $F(6,60) = 2.105$, $p = .066$. A significant interaction was found between PerMag scores and Social Anhedonia scores on the AORI, Pillai's $F(6,60) = 4.214$, $p < .01$. Specifically, an ANOVA of subscales indicated a significant interaction when looking at the AORI subscale of Closeness, $F(1,65) = 7.758$, $p < .01$ (see Figure 1). Two trends were also found for Social Anhedonia in regard to two subscales of the AORI. Participants scoring in the lower half on the Social Anhedonia scale scored higher on both the relation with peers subscale of the AORI, $F(1,65) = 8.402$, $p < .01$, and the closeness subscale, $F(1,65) = 12.552$, $p < .01$ (see Table 3 for means).

The Life Style Index of Ego Defenses

A 2 (Hi-Lo PerMag) x 2 (Hi-Lo Social Anhedonia) MANOVA of the Life Style Index Scales did not indicate a significant PerMag effect, Pillai's $F(8,61) = 1.645$, $p = .131$, ns, or Social Anhedonia effect, Pillai's $F(8,61) = 1.108$, $p = .370$, ns, for any of the nine ego defenses. After separating the ego defenses into groups signified as being mature or less mature, a 2 (Hi-Lo PerMag) x 2 (Hi-Lo Social Anhedonia) MANOVA was conducted (see Table 4 for means). Participants scoring in the bottom half on the Social Anhedonia scale scored significantly higher on the less mature ego defenses than the higher scoring Social Anhedonia group, Pillai's $F(2,70) = 6.715$, $p < .05$.

Post Hoc Gender Effects

ANOVA analyses indicated that gender significantly effected scores on various subscales of all the questionnaires. Females ($\underline{M} = 30.97$, $\underline{SD} = 7.42$) scored marginally significantly lower on the Secure aspect of the AORI than did males ($\underline{M} = 34.00$, $\underline{SD} = 6.15$), $\underline{F}(1,88) = 3.805$, $p = .054$. Females ($\underline{M} = 34.66$, $\underline{SD} = 5.84$) scored significantly lower on the Independence subscale than did males ($\underline{M} = 37.83$, $\underline{SD} = 5.81$), $\underline{F}(1,88) = 5.888$, $p < .05$.

Males ($\underline{M} = 1.5818$, $\underline{SD} = .1292$) scored significantly higher than females ($\underline{M} = 1.5136$, $\underline{SD} = .1139$) on the mature ego defenses category, $\underline{F}(1,86) = 6.380$, $p < .05$. Males scored significantly higher on both projection, $\underline{F}(1,89) = 4.013$, $p < .5$, and intellectualization, $\underline{F}(1,86) = 5.698$, $p < .05$ (see Table 5 for means).

In order to examine gender effects on the IRQ in conjunction with PerMag and Social Anhedonia scores, a 2 (Hi-Lo PerMag) x 2 (Hi-Lo Social Anhedonia) x 2 (Gender) MANOVA was performed. Results showed a significant main effect for gender, Pillai's $\underline{F}(3,53) = 4.325$, $p < .01$, and aa effect approaching significance for PerMag score, Pillai's $\underline{F}(1,53) = 2.435$, $p = .075$. Since the PerMag group effect approached significance, a MANCOVA was performed to control for gender. After partialing out the gender variable, a significant main effect was found for PerMag group on the IRQ, Pillai's $\underline{F}(3,56) = 3.533$, $p < .05$. Specifically, ANOVA's of the subscales showed that average scoring PerMag participants scored significantly lower on the total care component of the IRQ, $\underline{F}(1,58) = 7.627$, $p < .01$ (see Table 6 for means). However, average PerMag participants scored significantly higher on the total criticism, $\underline{F}(1,58) = 4.956$, $p < .05$, and total overprotection components, $\underline{F}(1,58) = 7.993$, $p < .01$ (see Table 9 for means).

Two interaction effects were observed. There was a marginally significant interaction of PerMag scores and Social Anhedonia scores on the IRQ component of total care, $F(1,58) = 3.791$, $p = .056$, and a significant interaction on the component of criticism, $F(1,58) = 4.145$, $p < .05$ (see Figures 3 and 4).

Discussion

Overall, scores on Chapman's (1992) Perceptual Aberration and Magical Ideation (Per-Mag) scales as well as Social Anhedonia scale are marginally related to various aspects of relationship, attachment, and ego defense styles. The first hypothesis, that Per-Mag and Social Anhedonia scores positively relate, was weakly depicted in the results.

Using totals of the three subsections of the IRQ (care, criticism, and overprotection), it was found that average scoring Per-Mag participants recalled less care in their influential relationships, but more criticism and overprotection than the high scoring Per-Mag participants. This counters the second hypothesis that high scoring Per-Mag individuals would exhibit greater dissatisfaction with past influential relationships.

Hypothesis 2 predicted that the high Social Anhedonia scorers would also exhibit greater relationship dissatisfaction. However, the results state that high scoring Social Anhedonia participants recalled greater care and less criticism in past influential relationships. This is counter to the hypothesis that deviant scores on the Per-Mag and/or Social Anhedonia scales would relate to deviantly high scores scales dealing with dysfunctional relationship patterns.

The lack of hypothesized findings might be due in part to the scale used to tap into significant relationships (IRQ). An interview might be a better way to delve into an

individual's relationship patterns. Interview techniques such as The Conflictual Relationship Theme Method (CCRT) should be investigated. A recently developed self-report version of the CCRT, the Central Relationship Questionnaire (CRQ) (2000), is another possibility for further research. After administering the IRQ, several participants felt that some questions were too specific to pertain to the particular influential person he or she had in mind. Maybe use of a different scale, or an interview technique would better grasp the concept of past and present relationship patterns when dealing with influential others.

Results dealing with attachment patterns using the AORI were a little more promising. Hypothesis 3, in regards to Social Anhedonia, was supported. High scoring Social Anhedonia participants recalled problems relating with peers as well as less closeness in overall attachments. High Per-Mag scorers showed slightly lower scores on the closeness of attachments, but not significantly lower scores. A significant interaction between Per-Mag scores and Social Anhedonia scores was observed on the closeness component of the AORI. The interaction supports hypothesis 3 for the specific avenue of closeness in attachment patterns. An average Per-Mag scorer with a low Social Anhedonia score, i.e. a person with healthy scores on both scales, exhibited higher levels of closeness in his or her attachments. A person scoring high on Per-Mag but low on Social Anhedonia shows less closeness. Less closeness was also exhibited by the average scoring Per-Mag participants who scored high on Social Anhedonia. The least amount of closeness was found in the individuals who scored high on both the Per-Mag and Social Anhedonia scales, in general terms a person with the least healthy scores.

Hypothesis 4 was not supported by the results. When grouped together into mature and less mature ego defenses, lower scoring Social Anhedonia participants used the less mature ego defenses more often. This contradicts the hypothesis. The seemingly more social, and in general more mentally healthy, participants exhibited higher levels of the less mature ego defenses. Maybe, contrary to the fourth hypothesis, more socially healthy people use less mature ego defenses because they take up less cognitive energy so more of their cognitive capacities can be relayed to social interacting. In this sense, the healthier individuals would use more cognitive capacity in direct social interactions. The healthier individuals may not have the need for higher order ego defenses if their lives are not impacted by stressful situations in need of defensive mechanisms. Maybe their threshold of what is truly stressful is higher than the mentally unstable person's. Another possibility is that the mentally healthier individuals, as exhibited by lower scores on Social Anhedonia and/or the Per-Mag scale, do not necessarily use more mature ego defenses more often, but know when to use a particular ego defense. Possibly, it is healthier to be adaptive enough to know when to use a particular defense, as well as use various defenses rather than a specific one or two. Maybe Plutchik's hierarchy of ego defenses as examined in this study is not accurate. Further research should focus on ego defenses, the possible lack of a hierarchy, and the level of usage of various defenses in mentally healthy and unhealthy samples.

Post hoc analyses indicated that gender impacted various aspects of the study. Females were less secure and less independent in attachments than were males. However, males used mature ego defenses more than females. Specifically, males exhibited higher levels of the mature ego defenses of projection and intellectualization

than did females. The idea of a social desirability bias could be modifying the apparent gender effects. Also, the gender of the experimenter could have effected the level of social desirability present in either female or male participants.

Gender also played a role in the analyses of the IRQ scores. Females exhibited more care when recalling influential relationships than did males. On the other hand, males recalled more overprotection and slightly more criticism than did females. These results follow the common intuition and gender stereotype of parents outwardly showing more care towards the daughter and being more critical of the son because “he can take it”. After controlling for gender, Per-Mag scoring showed an even stronger relation with IRQ scores, though still in opposition of the second hypothesis. Average Per-Mag scorers recalled less care in their influential relationships, more criticism, and greater overprotection. Again, these findings contradict the second hypothesis. Individuals low in Social Anhedonia and scoring average on the Per-Mag recalled the least amount of care in their influential relationships. Average scoring Per-Mag individuals who were high in Social Anhedonia showed the second lowest amount of care. High scoring Per-Mag participants who also exhibited high Social Anhedonia, however, did not recall the most care. People high on the Per-Mag but low on Social Anhedonia exhibited the highest recall of care about their influential relationships. The component of criticism showed differing results. Average Per-Mag scorers who also scored low on Social Anhedonia recalled the most criticism in their influential relationships.

One would think that the more criticized and less cared for individuals would turn out to evidence more deviant scores on scales such as Chapman’s (1992) Perceptual Aberration, Magical Ideation, and Social Anhedonia. However, the present results

contradict that assumption. The high Per-Mag participants evidenced deviant scores on the Per-Mag, but scores relating to the participants' relationship patterns as shown by the IRQ were not in the deviant direction. A possible counter to the assumption could be that the deviant scorers on PerMag and Social Anhedonia did not warrant an excess of criticism or overprotection from significant others due to the deviant scorers' lack of social relations. Though they might have engaged in unusual thoughts and perceptions, one does not know how often those deviant ideas were communicated to others. More care in their significant relationships could be warranted by their overall strange behaviors and shyness towards social situations.

The present study predicted significant relations between Chapman's three scales of proneness to psychotic thought and a select few scales pertaining to social aspects of daily life such as relationship patterns, attachment patterns, and ego defense styles. It was hypothesized that deviant scores on one or more of the Chapman scales would relate to deviant scores on the other scales. Intuitively, a higher instance of unusual thoughts and feelings reflected through the Per-Mag and/or higher Social Anhedonia should correlate with problems in the social aspects of life. Maybe the predictions remain plausible, but the scales used to investigate relationship and ego defense patterns were not adequate measures of the constructs.

In order to further understand the beginnings of mental instability, scales and interview procedures need to be refined. Maybe it is wishful thinking to hope that a self-assessment scale can significantly tap into the depths of human relationships. Interviews might offer better results, though they are more time consuming. An alternative scale to the IRQ might also result in different findings, since out of all the scales used, the IRQ

seemed the most confusing to the participants. In regards to ego defenses, the Life Style Index initially seemed like a promising scale with straightforward questions. However, results were non-significant or counter to the hypothesis. Again, a better measure of ego defenses as well as better definitions of specific core defenses might be needed for further research.

References

Conte, H.R. & Plutchik, R. (Eds). The Einstein Psychiatry Series: Ego Defenses: Theory and Measurement. New York: John Wiley & Sons, Inc., 1995.

Anderson, S.M. & Baum, A. (1994). Transference in interpersonal relations: Inferences and affect based on significant-other representations. Journal of Personality, 62(4), 459-497.

Bell M., Lysaker P., and Milstein R. (1992). Object relations deficits in subtypes of schizophrenia. Journal of Clinical Psychology, 48 (4), 433-444.

Buelow G., McClain M, and McIntosh I. (1996). A new measure for an important construct: The attachmentand object relations inventory. Journal of Personality Assessment, 66 (3), 604-623.

Cadenhead, K., Kumar, C., and Braff, D. (1996). Clinical and experimental characteristics of "hypothetically psychosis prone" college students. Journal of Psychiatric Research, 30(5), 331-340.

Chapman, L.J. & Chapman, J.P. (1980). Scales for rating psychotic and psychotic-like experiences as continua. Schizophrenia Bulletin, 6, 476-489.

Chapman, L.J., Chapman, J.P., and Raulin, M.L. (1976). Scales for physical and social anhedonia. Journal of Abnormal Psychology, 85, 374-382.

Chen, S., Anderson, S.M., and Hinkley, K. (1999). Triggering transference: Examining the role of applicability in the activation and use of significant-other representations in social perception. Social Cognition, 17(3), 332-365.

Conte, H.R., Plutchik R., Buck L., Picard S., and Karasu T.B. (1991). Interrelations between ego functions and personality traits: Their relation to psychotherapy outcome. American Journal of Psychotherapy, 45(1), 69-77.

Crandall, J.E. & Biaggio, M.K. (1984). Relations of two measures of social interest to ego defensiveness. Individual Psychology: Journal of Adlerian Theory, Research & Practice, 40(1), 83-91.

Davidson, K. & MacGregor, M.W. (1998). A critical appraisal of self-report defense mechanism measures. Journal of Personality, 66 (6), 965-991.

Eckblad, M. & Chapman, L.J. (1983). Magical ideation as an indicator of schizotypy. Journal of Consulting and Clinical Psychology, 51, 215-225.

Frangou, S. & Byrne, P. (2000). How to manage the first episode of schizophrenia: Early diagnosis and treatment may prevent social disability later. British Medical Journal, 327(7260), 522-524.

Garbarino, J.J. (1998). Comparisons of the constructs and psychometric properties of selected measures of adult attachment. Measurement and Evaluation in Counseling and Development, 31, 28-45.

Kazarian, S.S. & Baker, B. (1987). Influential relationships questionnaire: Data from a nonclinical population. Psychological Reports, 67, 511-514.

Kernberg, P.F., Weiner, A.S., and Bardenstein, K.K. (Eds). Personality Disorders in Children and Adolescents. New York: Basic Books, 2000.

Kwapil, T.R. (1998). Social anhedonia as a predictor of the development of schizophrenia-spectrum disorders. Journal of Abnormal Psychology, 107(4), 558-565.

Kwapil, T.R., Miller, M.B., Zinser, M.C., Chapman, J.C., and Chapman, L.J. (1997). Magical ideation and social anhedonia as predictors of psychosis proneness: A partial replication. Journal of Abnormal Psychology, 106(3), 491-495.

Lenzenweger M.F. & Loranger A.W. (1989). Psychosis proneness and clinical psychopathology: Examination of the correlates of schizotypy. Journal of Abnormal Psychology, 98 (1), 3-8.

Lopez, F.G. & Brennan, K.A. (2000). Dynamic processes underlying adult attachment organization: Toward an attachment theoretical perspective on the healthy and effective self. Journal of Counseling Psychology, 47(3), 283-300.

McCullough, J.P. Treatment for Chronic Depression. New York: Guilford Press, 2000.

McGlashan, T.H. & Hoffman, R.E. (2000). Schizophrenia as a disorder of developmentally reduced synaptic connectivity. Archives of General Psychiatry, 57(7), 637-651.

Muir, R.C. (1995). Transpersonal processes: A bridge between object relations and attachment theory in normal and psychopathological development. British Journal of Medical Psychology, 68, 243-257.

Reis, H.T., Collins, W.A., and Berscheid, E. (2000). The relationship context of human behavior and development. Psychological Bulletin, 126(6), 844-872.

Thalbourne, M.A. (1994). Belief in the paranormal and its relationship to schizophrenia-relevant measures: A confirmatory study. British Journal of Clinical Psychology, 33, 78-80.

Tsuang, M.T., Stone, W.S., and Faraone, S.V. (2000). Toward reformulating the diagnosis of schizophrenia. American Journal of Psychiatry, 157, 1041-1050.

Table 1

Influential Relationships Questionnaire (IRQ) Means for PerMag Scorers

	<i>PerMag Medium</i>	<i>PerMag High</i>
<i>IRQ Total Care</i>	1.7264 (.2912)	1.8657 (.2526)
<i>IRQ Total Criticism</i>	3.3240 (.3626)	3.1199 (.3116)
<i>IRQ Total Overprotection</i>	2.7475 (.2246)	2.6357 (.2521)

Table 2

Influential Relationships Questionnaire (IRQ) Means for Social Anhedonia Scorers

	<i>Social Anhedonia Low</i>	<i>Social Anhedonia High</i>
<i>IRQ Total Care</i>	1.6804 (.3149)	1.8677 (.2219)
<i>IRQ Total Criticism</i>	3.3769 (.3542)	3.1298 (.3192)

Table 2

Influential Relationships Questionnaire (IRQ) Means for Social Anhedonia Scorers

	<i>Social Anhedonia Low</i>	<i>Social Anhedonia High</i>
<i>IRQ Total Care</i>	1.6804 (.3149)	1.8677 (.2219)
<i>IRQ Total Criticism</i>	3.3769 (.3542)	3.1298 (.3192)

Table 3

Attachment and Object Relations Inventory (AORI) Means and Social Anhedonia

	<i>Social Anhedonia Low</i>	Social Anhedonia High
<i>AORI Peer</i>	40.55 (4.30)	36.76 (5.47)
<i>AORI Close</i>	39.94 (6.82)	32.95 (7.44)

Table 4

Total of Non-Mature Ego Defenses Means and Social Anhedonia

	<i>Social Anhedonia Low</i>	<i>Social Anhedonia High</i>
<i>Non-Mature Ego Defenses</i> (Compensation, Intellectualization, Reaction Formation)	1.6906 (.09656)	1.6225 (.1071)

Table 5

Gender Effects on Specific Ego Defenses Means

	<i>Females</i>	<i>Males</i>
<i>Projection</i>	1.4590 (.2135)	1.5573 (.2408)
<i>Intellectualization</i>	1.3898 (.1299)	1.4626 (.1436)

Table 6

PerMag Effects on IRQ Total Means After Controlling for Gender

	<i>PerMag Medium</i>	<i>PerMag High</i>
<i>Care</i>	1.727 (.039)	1.918 (.056)
<i>Criticism</i>	3.315 (.050)	3.119 (.071)
<i>Overprotection</i>	2.756 (.034)	2.585 (.049)

Figure Captions

Figure 1. Interaction for PerMag scores and Social Anhedonia scores for the closeness subscale means of the AORI.

Figure 2. Interaction for PerMag scores and Social Anhedonia scores for the total close subscale means of the IRQ after controlling for the gender variable.

Figure 3. Interaction for PerMag scores and Social Anhedonia scores for the total criticism subscale means of the IRQ after controlling for the gender variable.

Figure 1: PerMag x Social Anhedonia

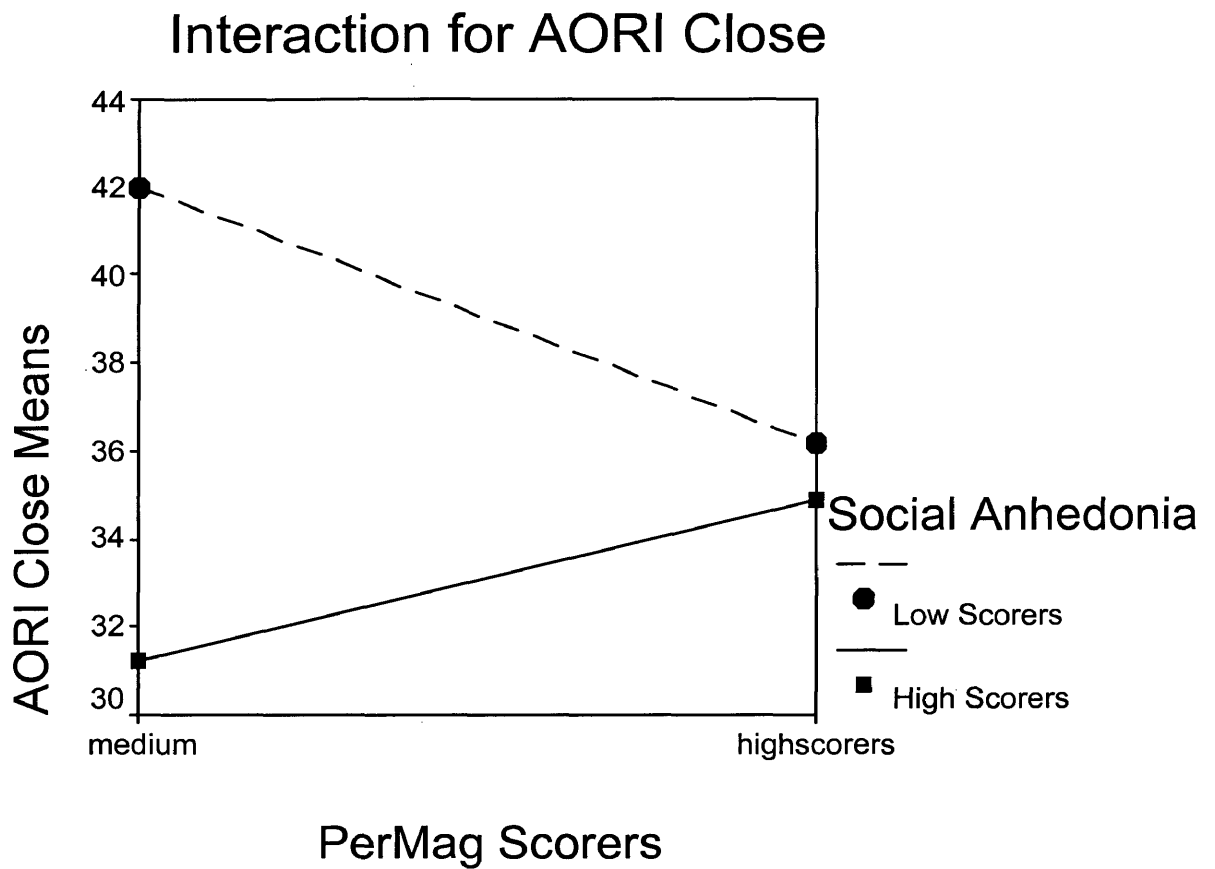


Figure 2: PerMag x Social Anhedonia

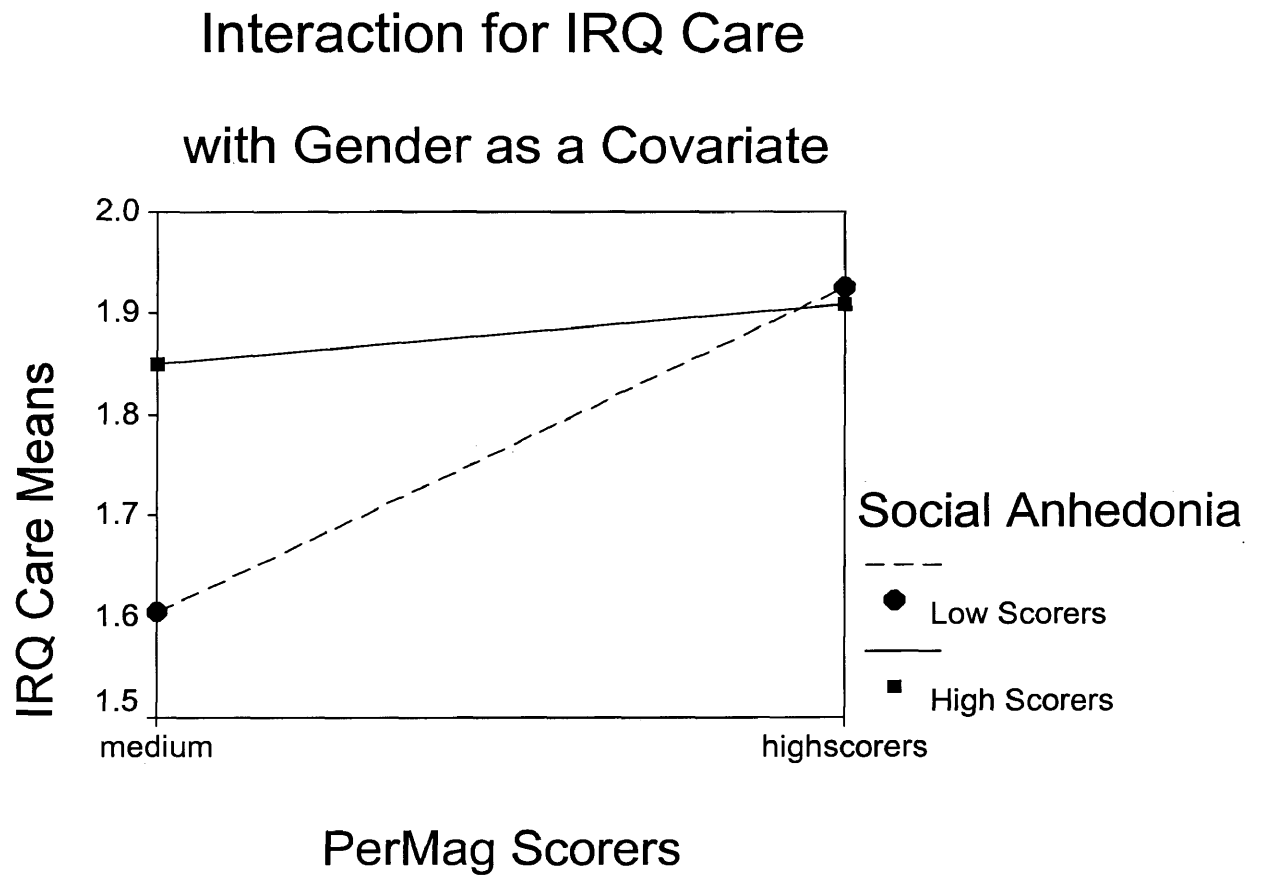
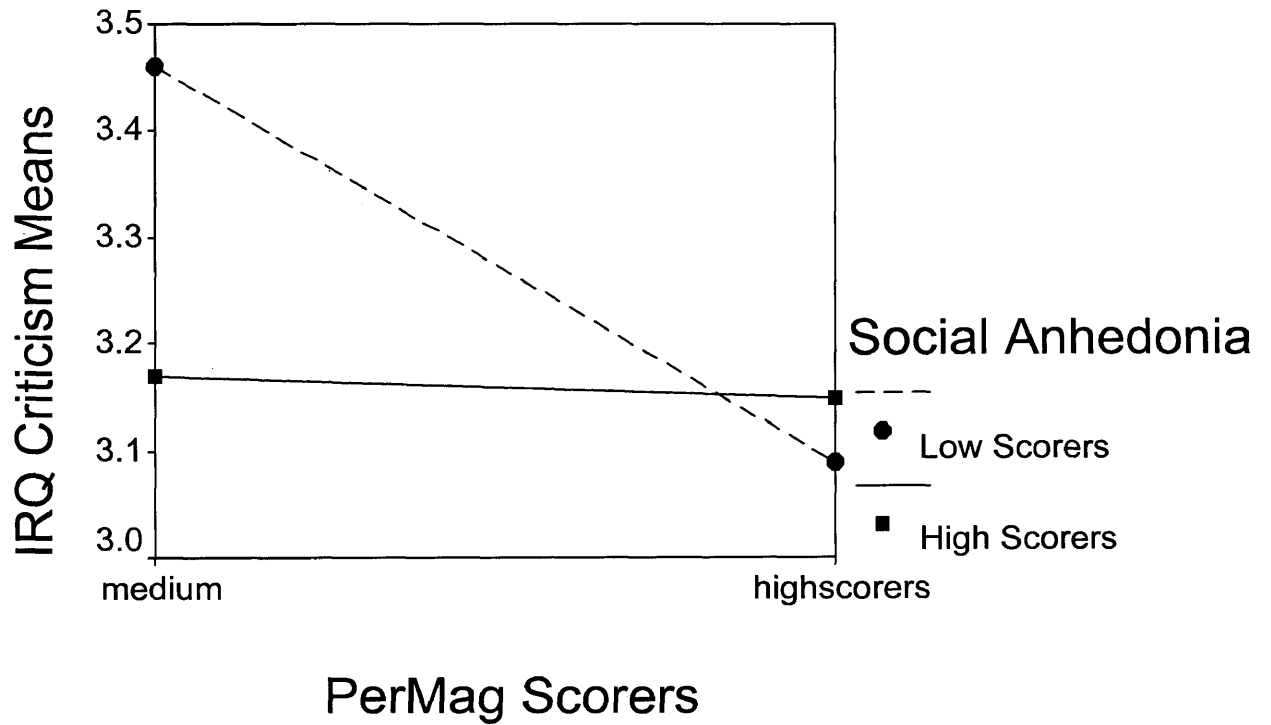


Figure 3: PerMag x Social Anhedonia

Interaction for IRQ Criticism

with Gender as a Covariate



Appendix A

The Perceptual Aberration Scale

Please answer each item true or false by circling the appropriate letter (T=true, F=false) before each statement. Please do not skip any items. It is important that you answer every item, even if you are not quite certain which is the best answer. An occasional item may refer to experiences that you have had only while taking drugs. Unless you have had the experience at other times (when not under the influence of drugs), mark it as if you have not had that experience. Some items may sound like others, but all of them are slightly different. Answer each item individually, and don't worry about how you answered a somewhat similar previous item.

- | | | |
|---|---|---|
| T | F | 1. I sometimes have had the feeling that some parts of my body are not attached to the same person. |
| T | F | 2. Occasionally I have felt as though my body did not exist. |
| T | F | 3. Sometimes people whom I know well begin to look like strangers. |
| T | F | 4. My hearing is sometimes so sensitive that ordinary sounds become uncomfortable. |
| T | F | 5. Often I have a day when indoor lights seem so bright that they bother my eyes. |
| T | F | 6. My hands or feet have never seemed far away. |
| T | F | 7. I have sometimes felt confused as to whether my body was really my own. |
| T | F | 8. Sometimes I have felt that I could not distinguish my body from other objects around me |
| T | F | 9. I have felt that my body and another person's body were one and the same. |
| T | F | 10. I have felt that something outside my body was part of my body. |
| T | F | 11. I sometimes have had the feeling that my body is abnormal. |
| T | F | 12. Now and then, when I look in the mirror, my face seems quite different than usual. |
| T | F | 13. I have never had the passing feeling that my arms or legs have become longer than usual. |

Appendix A

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|---|---|--|
| T | F | 14. I have sometimes felt that some part of my body no longer belongs to me. |
| T | F | 15. Sometimes when I look at things like tables and chairs, they seem strange. |
| T | F | 16. I have felt as though my head or limbs were somehow not my own. |
| T | F | 17. Sometimes part of my body has seemed smaller than it usually is. |
| T | F | 18. I have sometimes had the feeling that my body is decaying inside. |
| T | F | 19. Occasionally it has seemed as if my body had taken on the appearance of another person's body. |
| T | F | 20. Ordinary colors sometimes seem much too bright to me. |
| T | F | 21. Sometimes I have had a passing thought that some part of my body was rotting away. |
| T | F | 22. I have sometimes had the feeling that one of my arms or legs is disconnected from the rest of my body. |
| T | F | 23. It has seemed at times as if my body was melting into my surroundings. |
| T | F | 24. I have never felt that my arms or legs have momentarily grown in size. |
| T | F | 25. The boundaries of my body always seem clear. |
| T | F | 26. Sometimes I have had feelings that I am united with an object near me. |
| T | F | 27. Sometimes I have had the feeling that a part of my body is larger than it usually is. |
| T | F | 28. I can remember when it seemed as though one of my limbs took on an unusual shape. |
| T | F | 29. I have had the momentary feeling that my body has become misshapen. |
| T | F | 30. I have had the momentary feeling that the things I touch remain attached to my body. |

Appendix A

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|---|---|---|
| T | F | 31. Sometimes I feel like everything around me is tilting. |
| T | F | 32. I sometimes have to touch myself to make sure I'm still there. |
| T | F | 33. Parts of my body occasionally seem dead or unreal. |
| T | F | 34. At times I have wondered if my body was really my own. |
| T | F | 35. For several days at a time I have had such a heightened awareness of sights and sounds that I cannot shut them out. |

Appendix B

The Magical Ideation Scale

Please answer each item true or false by circling the appropriate letter (T=true, F=false) before each statement. Please do not skip any items. It is important that you answer every item, even if you are not quite certain which is the best answer. An occasional item may refer to experiences that you have had only while taking drugs. Unless you have had the experience at other times (when not under the influence of drugs), mark it as if you have not had that experience. Some items may sound like others, but all of them are slightly different. Answer each item individually, and don't worry about how you answered a somewhat similar previous item.

- | | | |
|---|---|---|
| T | F | 1. I have occasionally had the silly feeling that a TV or radio broadcaster knew I was listening |
| T | F | 2. I have felt that there were messages for me in the way things were arranged, like in a store window. |
| T | F | 3. Things sometimes seem to be in different places when I get home, even though no one has been there. |
| T | F | 4. I have never doubted that my dreams are the products of my own mind. |
| T | F | 5. I have noticed sounds on my records that are not there at other times. |
| T | F | 6. I have had the momentary feeling that someone's place has been taken by a look-alike. |
| T | F | 7. I have never had the feeling that certain thoughts of mine really belonged to someone else. |
| T | F | 8. I have wondered whether the spirits of the dead can influence the living. |
| T | F | 9. At times, I perform certain little rituals to ward off negative influences. |
| T | F | 10. I have felt that I might cause something to happen just by thinking too much about it |
| T | F | 11. At times, I have felt that a professor's lecture was meant especially for Me. |
| T | F | 12. I have sometimes felt that strangers were reading my mind. |

Appendix B

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|---|---|--|
| T | F | 13. If reincarnation were true, it would explain some unusual experiences I have had. |
| T | F | 14. I sometimes have a feeling of gaining or losing energy when certain people look at me or touch me. |
| T | F | 15. It is not possible to harm others merely by thinking bad thoughts about them. |
| T | F | 16. I have sometimes senses an evil presence around me, although I could not see it. |
| T | F | 17. People often behave so strangely that one wonders if they are part of an experiment. |
| T | F | 18. The government refuses to tell us the truth about flying saucers. |
| T | F | 19. I almost never dream about things before they happen. |
| T | F | 20. I have sometimes had the passing thought that strangers are in love with me. |
| T | F | 21. The hand motions that strangers make seem to influence me at times. |
| T | F | 22. Good luck charms don't work. |
| T | F | 23. I have sometimes been fearful of stepping on sidewalk cracks. |
| T | F | 24. Numbers like 13 and 7 have no special powers. |
| T | F | 25. I have had the momentary feeling that I might not be human. |
| T | F | 26. I think I could learn to read others' minds if I wanted to. |
| T | F | 27. Horoscopes are right too often for it to be a coincidence. |
| T | F | 28. Some people can make me aware of them just by thinking about me. |
| T | F | 29. I have worried that people on other planets may be influencing what happens on Earth. |
| T | F | 30. When introduced to strangers, I rarely wonder whether I have known them before. |

Appendix C

The Revised Social Anhedonia Scale

Please answer each item true or false by circling the appropriate letter (T=true, F=false) before each statement. Please do not skip any items. It is important that you answer every item, even if you are not quite certain which is the best answer. An occasional item may refer to experiences that you have had only while taking drugs. Unless you have had the experience at other times (when not under the influence of drugs), mark it as if you have not had that experience. Some items may sound like others, but all of them are slightly different. Answer each item individually, and don't worry about how you answered a somewhat similar previous item.

- | | | |
|---|---|---|
| T | F | 1. Having close friends is not as important as many people say. |
| T | F | 2. I attach very little importance to having close friends. |
| T | F | 3. I prefer watching television to going out with other people. |
| T | F | 4. A car ride is much more enjoyable if someone is with me. |
| T | F | 5. I like to make long distance phone calls to friends and relatives. |
| T | F | 6. Playing with children is a real chore. |
| T | F | 7. I have always enjoyed looking at photographs of friends. |
| T | F | 8. Although there are things that I enjoy doing by myself, I usually
Seem to have more fun when I do things with other people. |
| T | F | 9. I sometimes become deeply attached to people I spend a lot of time
with. |
| T | F | 10. People sometimes think that I am shy when I really just want to be
left alone. |
| T | F | 11. When things are going really good for my close friends, it makes
me feel good too. |
| T | F | 12. When someone close to me is depressed, it brings me down also. |
| T | F | 13. My emotional responses seem very different from those of other
people. |
| T | F | 14. When I am alone, I often resent people telephoning me or knocking
at my door. |

Appendix C

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|---|---|---|
| T | F | 15. Just being with friends can make me feel really good. |
| T | F | 16. When things are bothering me, I like to talk to other people. |
| T | F | 17. I prefer hobbies and leisure activities that do not involve other people. |
| T | F | 18. It's fun to sing with other people. |
| T | F | 19. Knowing that I have friends who care about me gives me a sense of security. |
| T | F | 20. When I move to a new city, I feel a strong need to make new friends. |
| T | F | 21. People are usually better off if they stay aloof from emotional involvements with most others. |
| T | F | 22. Although I know I should have affection for certain people, I don't really feel it. |
| T | F | 23. People often expect me to spend more time talking with them than I would like. |
| T | F | 24. I feel pleased and gratified as I learn more and more about the emotional life of my friends. |
| T | F | 25. When others try to tell me about their problems and hang-ups, I usually listen with interest and attention. |
| T | F | 26. I never really had close friends in high school. |
| T | F | 27. I am usually content to just sit alone, thinking and daydreaming. |
| T | F | 28. I'm much too independent to really get involved with other people. |
| T | F | 29. There are few things more tiring than to have a long, personal discussion with someone. |
| T | F | 30. It made me sad to see all my high school friends go their separate ways when high school was over. |
| T | F | 31. I have often found it hard to resist talking to a good friend, even when I have other things to do. |
| T | F | 32. Making new friends isn't worth the energy it takes. |

Appendix D

Attachment and Object Relations Inventory

Please read each statement and select the response that best describes you or your feelings.

- 1 = strongly disagree
- 2 = disagree
- 3 = neither agree nor disagree
- 4 = agree
- 5 = strongly agree

1. I often feel needy.
2. I have many emotional problems.
3. My family is a disappointment.
4. I am very independent.
5. I often prefer being alone rather than being with others.
6. I keep my emotional distance in relationships.
7. My parents are approachable.
8. Close relationships make me uncomfortable.
9. I live by my own rules.
10. My parents are responsive to me.
11. I want people to be close, but I usually push them away.
12. My parents are there for me when I need them.
13. I feel comfortable having others emotionally close to me.
14. I tend to be the strong one.
15. Others are ready to help me.
16. I really want close relationships, but I need my space.
17. I worry a lot.
18. My parents are unavailable to me.
19. My romantic partner is there for me when I need him/her.
20. My partner and I rarely fight.
21. My parents were always unresponsive to my needs.
22. My family is dysfunctional.
23. My partner and I are always fighting.
24. My relationships usually last.
25. I am usually jealous in relationships.
26. My family has always been there when I needed them.
27. I am often the weak one.
28. I depend on others too often.
29. Friends help me when I ask.
30. I am confident in my relationships with others.
31. I am tough minded.
32. My romantic partner does not give me what I need.
33. I know what I want.
34. People will help you when you need them.

Appendix D

35. I do not need close relationships.
36. I often feel vulnerable in relationships.
37. My relationships are not stable.
38. My romantic partner is usually unavailable to me.
39. I am afraid of commitment.
40. I am too dependent.
41. I feel comfortable being emotionally close to others.
42. My romantic partner is responsive to me.
43. People usually give me what I need.
44. I have a good sex life.
45. People are responsive toward me.
46. A crisis brings out the best in me.
47. My parents were/are accessible to me.
48. It is frequently difficult for me to make decisions.
49. My friends are responsive to me.
50. My family is not stable.
51. It is easy for me to get emotionally close to others.
52. It is scary to trust someone.
53. My romantic partner is supportive.
54. My romantic partner has always been there for me when I needed him/her.
55. I usually don't ask for help because I frequently won't get it.
56. I am fearful about important relationships.
57. I am a very secure person.
58. People don't give me what I need.
59. Others make time for me.
60. Emotionally, I am either hot or cold.

Appendix E

Life Style Index

Please indicate whether each of the following statements describes the way you usually feel or act. If the statement does not describe you, place a check in the first column marked "No". If the statement does describe you, place a check in the "Yes" space that is on the same line with it.

	No	Yes
1. I am a very easy person to get along with.....
2. I sleep more than most people I know.....
3. There has always been a person whom I wished I were like.
4. If I get medical treatment, I always try to find out the reasons for everything that is done.
5. When I want something I just can't wait to get it
6. I frequently blush
7. One of my greatest assets is my self-control
8. I sometimes have an urge to push my fist through a wall
9. I "fly off the handle" easily
10. When someone shoves me in a crowd, I feel like killing him
11. I rarely remember my dreams
12. People who boss other people around make me furious
13. I get sick a lot
14. I am an exceptionally fair person
15. The more possessions I accumulate, the happier I am
16. In my daydreams, I am always the center of attention
17. I get upset at the thought of members of my family walking around at home without clothes on
18. People have told me that I brag too much
19. When I've been rejected by someone, I've sometimes felt suicidal
20. People admire almost everything about me
21. Sometimes, I have been so angry that I have broken things
22. People who start rumors really annoy me
23. I always see the bright side of things
24. I keep wanting or trying to change my appearance through exercise
25. Sometimes I wish that an atom bomb would destroy the world

Appendix E

	No	Yes
26. People have told me that I tend to be too impulsive
27. I am free from prejudice
28. I'm annoyed by the fact that people show off too much
29. I hate hostile people
30. I try very hard not to be nasty to anyone
31. I am the type that never cries
32. I smoke heavily
33. I have trouble giving up anything that belongs to me
34. I have a bad memory for faces
35. I masterbate a lot
36. I have trouble remembering people's names
37. If someone bothers me, I don't tell it to him, but I tend to complain to someone else.
38. I am always willing to listen to all sides of a problem even when I know I'm right
39. I never feel fed-up with people
40. I find it hard to sit still for any length of time
41. I can hardly remember anything that happened in my childhood
42. It takes me a long time to see bad qualities in other people
43. I believe it is better to think things out that get angry
44. People tell me I'll believe anything
45. People who try to get their way by yelling and screaming make me sick
46. I put things that I don't like out of my mind
47. I'm always optimistic
48. When I go on a trip, I plan every detail in advance
49. Sometimes I find myself much angrier at someone than is justified by the situation
50. When things don't go my way, I sometimes sulk
51. In arguments, I enjoy pointing out mistakes in the other person's thinking
52. When I am confronted by a challenge, I feel a strong urge to meet it.
53. I feel outraged by dirty movies
54. I get irritable when I don't get attention
55. People tell me I am not very emotional
56. When I make decisions, I usually have second thoughts
57. When someone says I am unable to do something, then I really want to do it.

Appendix F

The Influential Relationships Questionnaire

1. Who has been the most influential person in your life? (you don't have to use proper names, just who this person is in relation to you)

Please answer the following questionnaire as it applies to this person.

2. Who has been the second most influential person in your life?

Please answer the following second copy of the same questionnaire as it applies to this person.

3. Who has been the third most influential person in your life?

Please answer the following third copy of the same questionnaire as it applies to this person.

Appendix F

	Strongly Agree	Agree	Disagree	Strongly Disagree
1. Speaks to me with a warm and friendly voice	()	()	()	()
2. Does not help me as much as I need	()	()	()	()
3. Often criticizes me	()	()	()	()
4. Lets me do those things I like doing	()	()	()	()
5. Seems emotionally cold to me	()	()	()	()
6. Appears to understand my problems and worries	()	()	()	()
7. Does not want me to grow up	()	()	()	()
8. Likes me to make my own decisions	()	()	()	()
9. Is affectionate to me	()	()	()	()
10. Disapproves of my behavior	()	()	()	()
11. Gets angry at me for no reason	()	()	()	()
12. Tries to control everything I do	()	()	()	()
13. Does not resent me	()	()	()	()
14. Invades my privacy	()	()	()	()
15. Enjoys talking things over with me	()	()	()	()
16. Makes me feel rejected	()	()	()	()
17. Frequently smiles at me	()	()	()	()
18. Points out my weaknesses rather than praising me	()	()	()	()
19. Tends to baby me	()	()	()	()
20. Does not seem to understand what I need or want	()	()	()	()
21. Makes me feel that he/she dislikes me	()	()	()	()
22. Lets me decide things for myself	()	()	()	()
23. Makes me feel I am not wanted	()	()	()	()

Appendix F

24. Talks about my illness in way that upsets me	()	()	()	()
25. Can make me feel better when I am upset	()	()	()	()
26. Does not talk with me very much	()	()	()	()
27. Puts me down	()	()	()	()
28. Tries to make me dependent on him/her	()	()	()	()
29. Feels I cannot look after myself unless he/she is around	()	()	()	()
30. Does not make me nervous	()	()	()	()
31. Gives me as much freedom as I want	()	()	()	()
32. Does not pick on me when I am ill	()	()	()	()
33. Lets me go out as often as I want	()	()	()	()
34. Is overprotective of me	()	()	()	()
35. Does not praise me	()	()	()	()
36. Says things which confuse me	()	()	()	()
37. Lets me dress in any way I please	()	()	()	()

About The Author

Sharon Wilson, a Master's in Psychology 2001 graduate of The College of William and Mary, obtained her undergraduate BA as a dual degree in Psychology and Creative Writing/English from Sweet Briar College in 1999. First-born daughter of Cliff and Martha Wilson, Sharon has been intrigued by psychology since her first year-long psychology class as a junior in high school. Originally from Queens, New York, where her parents were born and raised, she moved to a suburban town outside of Philadelphia Pennsylvania, where her family still resides. A fun loving and sometimes hyperactive individual, Sharon's passions include writing fiction, singing, playing with her cats, helping children, fast food binges, and psychology.

Sharon hopes to continue her psychology studies in the realm of school counseling. From there she aims to eventually obtain a PsyD and become a child/adolescent psychologist. She strives to adhere her deep interest in the social psychology of relationships to her work as a clinician. In the future, she intends to see her name in print as an author of psychologically driven fiction and/or nonfiction.